

# The scutigeromorphs (Chilopoda: Scutigleromorpha) in the collection of the National Museum of Natural History, Sofia

Pavel STOEV

**Abstract.** This paper is devoted to the treatment of the Scutigleromorpha collection in the National Museum of Natural History, Sofia. Seven species, belonging to the Scutigleridae Gervais, 1837 and Pselliodidae Würmli, 1978, are reported from 14 countries in Europe, Asia, South and Central America. *Thereuonema syriaca* Verhoeff, 1905 and *Thereuopoda longicornis* (Fabricius, 1793) are reported for a first time from Pakistan and Nepal, respectively. Two records from Brazil are based on a material from the Museo de Zoologia da USP, Sao Paulo, Brazil.

**Key words:** Chilopoda, Scutigleridae, Pselliodidae, Faunistics, Europe, Asia, South and Central America

## Introduction

In terms of systematics Scutigleromorpha is the least explored order of class Chilopoda. Despite research, which began as early as Linnaeus, and the scores of species named by prolific authors like George Newport, Fr. Meinert, Erich Haase, Karl Wilhelm Verhoeff, Ralph Chamberlin since then, no analysis of the taxonomically significant characters nor attempts at working out a modern classification, based on them, were ever made. Just recently, in a number of papers (WÜRMLI, 1972, 1973a, b, 1974a, b, c, 1975a, b, 1977, 1978, 1979; WÜRMLI & NEGREA, 1977) Marcus Würmli analysed the external morphology of the order, revised some of the genera (*Scutigera*, *Thereuonema*, *Thereuopoda*, neotropical *Pselliodes*) and resolved some long standing taxonomical problems. The lesser degree of knowledge about scutigleromorphs is also due to the fact that the animals are as a rule overlooked by collectors. Usually, only a few specimens from a certain collecting site enter the museum's collections. Thus, the fauna of many countries in Africa, Asia and the Pacific Islands remain unknown.

This paper puts on record the first part of the Scutigleromorpha collection, gathered mainly by Dr Petar Beron in 10 countries and deposited in the

National Museum of Natural History, Sofia. It deals with species from Europe<sup>1</sup>, Central and South America and Asia. Those collected in Africa and Oceania, as well as some still unidentified specimens from South Asia, are left for further investigation. Two records from Brazil are based on specimens, provided by Dr Jean-Jacques Geoffroy (Brunoy), which belong to the Museo de Zoologia da USP, Sao Paulo, Brazil. Additional material comes from the collecting trips of A. Popov, S. Andreev, D. Kozhuharov, B. Petrov, S. Beshkov, T. Ivanova and I. Tsonkov.

Here, I report seven species belonging to two families, Scutigerae Gervais, 1837 and Pselliodidae Würmli, 1978. *Thereuonema syriaca* Verhoeff and *Thereuopoda longicornis* (Fabricius) are reported for the first time from Pakistan and Nepal, respectively.

### Systematic part

#### Family SCUTIGERIDAE Gervais, 1837

#### Subfamily SCUTIGERINAE Gervais, 1837

#### *Scutigera coleoptrata* (Linneus, 1758)

*Scolopendra coleoptrata* Linnaeus, 1758 Systema Naturae, Holmiae, Editio X, 1: 638. Locus typicus: Spain.

**Material examined:** **Turkey:** 1 ♀, Sivas Prov., above Zara, 1,570 m, 24.06.2000, S. Beshkov leg. **Greece:** Thrace: 1 specimen, Kavala, 24.04.1942, B. Petrov leg.; ad. ♂, Evros District, Essimi Village, 18.05.1987, P. Beron leg.; ad. ♂, Kavala District, Zigos Village, Mavri Trypa Cave, 28.12.1982, P. Beron, S. Andreev leg.; Thassos Is.: ad. ♂, ♀, Acropolis above Limena, 25.06.1942, I. Tsonkov leg.; ad. ♀, near St. Athanasos Monastery above Limena, 24.06.1942, I. Tsonkov leg.; ♂, ♀, Marios Village, 08.06.1943, I. Tsonkov leg.; Kythnos Is.: ad. ♀, Dryopis Village, 16.05.1984, P. Beron leg.; ♂, same locality, 09.05.1987, P. Beron leg.; Serifos Is.: ♂ (Z. Matic det.), Coutalas, 0-300 m alt., 22.04.1984, P. Beron leg.; Salamina Is.: 2 ad. ♀♀, Peristeria Village, Cave of Peristeria, 08.05.1987, P. Beron leg.; Rhodes Is.: ♀, Archangelos Village, 02.05.1987, P. Beron leg.; Karpathos Is.: ♀, juv., Aperi Village, 300 m alt., 03.05.1984, P. Beron leg.; subad. ♂, Arch. Michail, 800-1,000 m alt., 04.05.1984, P. Beron leg.; Kasos Is.: ad. ♀, Aghia Marina, 06.05.1984, P. Beron leg.; Crete: ♂, Sitia District, Aghios Georgios Village, 09.05.1984, P. Beron leg. **Albania:** ♂, Shkodër, 50 m, 09.06.1993, P. Beron leg. **Romania:** ♂, ♀, Dobrogea, Babadag Distr., Jurifolca, Capul Dolosman Cape, under stones, on the shore of Razelm Lake, 31.07.2000, B. Petrov, T. Ivanova leg.

**General distribution:** SOUTH EUROPE: South France (incl. Corsica), Monaco, Spain (incl. Balearic Is. and Canary Is.), Portugal (incl. Madeira), Malta, Italy (incl. Sicily and Sardinia), Albania, Mainland Greece, Thasos Is., Mykonos Is., Kythnos Is., Salamina Is., Serifos Is., Kea Is., Thira Is., Limnos Is., Lesbos Is., Rhodes Is., Karpathos Is., Kasos Is., Kos Is., Astypalaia Is., Kerkira Is., Cephalonia Is., Levkas Is., Crete, Republic of Macedonia,

<sup>1</sup>These from Bulgaria were published in STOEV (2002)

Montenegro, Serbia, Bosnia and Herzegovina, Slovenia, Croatia (incl. Cherso Is.), Bulgaria, Romania, Ukraine, Georgia, Russia. CENTRAL EUROPE: South Hungary, South Slovakia, Czech Republic, Austria, Switzerland, South Germany, Luxembourg? ASIA: Turkey (incl. European part and Buyuk Ada Is.), Syria, Lebanon, Palestine, Israel, Jordan, Iran (150 km W Esfahan). AFRICA: Egypt, Libya, Tunisia, Algeria, Morocco, Kenya (above Marsabit town), Tanzania (Uluguru Mts.). INTRODUCED IN: England, Channel Is., Scotland, Denmark, Netherlands, China, Taiwan?, Vietnam, USA, Bermudas (St. David Is.), Canada, Argentina, Uruguay, Cameroon, Republic of South Africa, Mozambique, Zimbabwe, Angola (Sa da Bandeira), St. Helena Is., Cape Verde Islands. PROBABLY INTRODUCED IN: Azores.

***Scutigera linceci* (Wood, 1867)**

*Cermatia linceci* Wood, 1867 Proc. Acad. Nat. Sci. Philad., 19: 42-43.

Locus typicus: Texas.

**Material examined:** Cuba: 1 subad., Santiago de Cuba, Gran Piedra, 1,200 m, 25.02.1982, P. Beron leg.

**General distribution:** South USA (Texas, Arizona), Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Granada, Costa Rica (Turrialba), Panama, Cuba (Siera de la Gran Piedra).

**Remarks.** This species has first been reported from Cuba by WÜRMLI & NEGREA (1977). Our material comes from exactly the same place (Gran Piedra) their material was gathered.

**Subfamily THEREUONEMINAE Verhoeff, 1905**

***Thereuonema syriaca* Verhoeff, 1905**

*Thereuonema syriaca* Verhoeff, 1905b Zool. Anz., Leipzig, 29, p. 89.

Locus typicus: North Syria: Amanus Mt.: Sendschirli.

**Material examined:** Pakistan: ad. ♀, Baltistan, Karakoram Mts., Skardu Distr., Shigar Village, 2,600 m, under stones near a stream, 22.06.2001, B. Petrov leg.

**General distribution:** ASIA: South Turkey, Syria, Lebanon (Beirut), Palestine, Israel (Genazareth Lake), Jordan, Iraq (Djebel Hamrin), Saudi Arabia (Wadi Majorish), Yemen, Iran (Buschir, Polour Abali, Sha Pasand, North Gorgan), Pakistan (Shigar). AFRICA: Egypt, Sudan (Mongalla), Kenya (Baltchi).

**Remarks.** This is the first record of the species from Pakistan, which forms the easternmost border of its range. In another paper (in prep.) I discuss the synonymy of *syriaca* with *Scutigera microstoma* Meinert, 1886, a species described from Ambala and "Koolloo" (= ? Kulu) in North India. *Cermatia rubrolineata* Newport, 1844 may be another senior synonym of this species (HAASE, 1887). A re-examination of the types of Newport in the British Museum (Natural History) or collecting a fresh material from North India will resolve the problem. SILVESTRI's record (1935) of *T. turkestana* from Kargil in Indian Kashmir may actually prove to belong to this species.

***Thereuonema tuberculata* (Wood, 1862)**

*Cermatia tuberculata* Wood, 1862 J. Acad. Nat. Sci. Philad., N.S. 5 (1), p. 12.

Locus typicus: Japan?

**Material examined: China:** ♀, Tianjin, 21.06.1987, P. Beron leg.; ad. ♂, Beijing, Xiangshan Park, 11.08.1993, P. Beron leg.; subad. ♀, Yunnan, Kunming, 2,200 m, near Bamboo Temple, 29.12.1988, P. Beron leg. **North Korea:** ad. ♂, North Pyongan Prov., Myohyang Mt., 10-12.06.1987, P. Beron leg.; same province, Myohyang-San, climbing to the upper cave, 500-800 m, 12.08.1982, P. Beron, A. Popov leg.; ad. ♀, South Hwanghat Prov., waterfall near Haeju, 28.08.1982, P. Beron, A. Popov leg.; ♂, ♀, same province, near Haeju, Suyang-San, 07.06.1987, P. Beron leg.; ad. ♀, same locality, 1,200 m, 12.08.1982, P. Beron, A. Popov leg.; ad. ♂, South Pyongan Prov., Nampo, shore of Yellow Sea, 18.08.1982, P. Beron, A. Popov leg.; ad. ♀, Kangwon Prov., near Sijung Lake, 05.06.1987, P. Beron leg.; ♂, 2 ♀♀, Tesongsan near Pyongyang, 08.08.1982, P. Beron, A. Popov leg.; 3 ♂♂, Ryongaksan near Pyongyang, 07.08.1982, P. Beron, A. Popov leg.

**General distribution:** Japan (Tokyo, Yokohama, Fuji Mt., Chichibu Mt., Kanagawa, Kamakura, Kitayo-shinomura, Hiranuma, Takakiyama, Tsushima Is., Nii-jima Is., Honshu Is., Shikoku, Hokkaido?), China (Hong-Kong, Canton, Shanghai, Yang-tse-kiang, Tsingtau, Tsinan, Schantung, Chee-Foo, Jehol, Chaoyang, Kuatschen-dsy, Sandiopa, Sian, Tianjin, Beijing, Kunming, Hang Chau, Mandschuria), Taiwan (Pei Sze Wu Shan, Ta-Ping Shan, Zeh Tan), Korea (Haeju, near Sijung Lake, Tesongsan Ryongaksan, Myohyang Mt., Myohyang-San, Nampo, Kjoeng-kwido, Sokkri Mt., Yeongchi-gul Cave, Seong-gul Cave), Quelpart Island (Samyang-ri).

***Thereuonema turkestanica* Verhoeff, 1905**

*Thereuonema turkestanica* Verhoeff, 1905b Zool. Anz., Leipzig, 29, p. 88.

Locus typicus: Uzbekistan: Buchara.

**Material examined: Afghanistan:** ♂, Kabul, Tape Bibi Mahru, 1,900 m, 07.06.1986, P. Beron leg.; 2 ♂♂, ♀, Kabul, 1,800 m, 02-19.06.1986, P. Beron leg.

**General distribution:** Uzbekistan (Buchara, Tashkent, Chadschent, Samarkand), Kyrgyzstan (Tschamandy near Sonkul Lake), Afghanistan (Kabul), North India (Kargil).

**Remarks.** This species has already been reported from Kabul by WÜRMLI (1975a).

***Thereuopoda longicornis* (Fabricius, 1793)**

*Scolopendra longicornis* Fabricius, 1793 Entom. Syst. II.: 390.

Locus typicus: Tranquebariae. (Mus. Dom. Lund).

**Material examined: China:** Yunnan, ad. ♂, juv., Menzi County, Wulichong Sinkhole Cave (N 3), 04.01.1989, P. Beron leg.; 2 ad. ♂♂, 2 ad. ♀♀, subad. ♂, same county, Chi Be Yi Dong Cave, 12.01.1989, P. Beron leg.; ad. ♂, ad. ♀, same county, the cave near the footpath to the plateau, 05.01.1989, P. Beron leg.; ad. ♂, subad. ♀, Chinshui County, Yan Dong Cave, 12.01.1989, P. Beron leg. **Nepal:** ad. ♀, Langtang, 3,500-3,600 m, 17.09.1984, P. Beron, S.

Andreev leg.; ♂, 3 ♀♀, Langtang Valley, Ghora Tabela, 2,700-3,000 m, 16.09.1984, P. Beron, S. Andreev leg.; ad. ♀, Langtang Valley, Kyangjin, Gompa (on the Gompa side), 3,850-4,000 m, 19.09.1984, P. Beron, S. Andreev leg.; 3 ad. ♀♀, same locality, 4,000-4,250 m, 19.09.1984, P. Beron, S. Andreev leg.; subad. ♂, Kali Gandaki Valley, Kagbeni Village, 2,800 m, 22.10.1984, P. Beron leg.; ad. ♀, Dhaulagiri Zone, Marpha, 2,600-2,700 m, 21.10.1984, P. Beron leg.; ad. ♀, Jomosom, 2,700-2,800 m, 22.10.1984, P. Beron leg. **Vietnam:** ♂, ♀, Quang Ninh Prov., Camp at Ninh Ha Long (Halong Hotel), 28.02.1989, P. Beron, D. Kozhucharov leg.; ad. ♀, Langson Prov., rain forest near Huu Lung, 19.03.1989, P. Beron leg. **Thailand:** ad. ♀, Doi Inthanon National Park, 1,200-1,300 m, 12.11.1984, P. Beron, S. Andreev leg. **Indonesia:** ad. ♂, Nias Is., Cave I, 15.04.1994, P. Beron leg.

**General distribution:** Japan (Synho Cave), China (Dji-tu, Yangtze-kiang, Hsifan-Bergland, Menzi County, Chinshui County), Taiwan, Nepal (Langtang, Ghora Tabela, Kyangjin, Kagbeni, Marpha, Jomosom), Bhutan, India (Pongoor, Siju Cave, Charmadi, Vellore, Madras), Sri Lanka, Vietnam, Laos, Cambodia, Myanmar, Thailand, Malaysia, Singapore, Indonesia (Sumatra Is., Java Is., Nias Is., Lombok Is., Sumbawa Is.), Borneo Is., Philippines (Palawan Is., Banda Is.), Nicobar Islands, New Ireland, Mauritius, Australia (Queensland and Malanda).

**Remarks.** This species is widespread in East and South Asia, the islands of Oceania and possibly Australia and Mauritius. It is herewith reported for the first time from Nepal, although this finding may be expected, as the species has already been reported from the neighboring Bhutan and India. The Gompa samples are among the highest ever recorded for a scutigermorph centipede.

## Family PSELLIODIDAE Würmli, 1978

### *PSELLIODES guildingii* (Newport, 1845)

*Cermatia guildingii* Newport, 1845 Trans. Linn. Soc. Lond., 19: 356.

Locus typicus: St. Vincent Island.

**Material examined:** **Cuba:** ♂ ad., Pinar del Rio Prov., Cueva del Cafetal, 23.11.1981, P. Beron leg.; ♂, same province, Ceja de Francisco Village, 150 m, 05.12.1981, P. Beron leg.; ♀, Santiago de Cuba Prov., Forestal "La Francia", 800 m, 06.03.1982, P. Beron leg.; ♂, Sierra Maestra, Pico Cuba, 500 m, 27.02.1982, P. Beron leg.; 3 subads., Pico Turquino, 1,900-1,994 m, 03.03.1982, P. Beron leg. **Bolivia:** ♂, La Paz, 3,600 m, 19.06.1979, P. Beron leg. **Brazil:** ♀, Bahia State, Gruta Toca dos Morcegos, dark zone, 22.09.1997, Eleonora Trajano leg. (Museo de Zoologia, Sao Paulo); ♂, same state, Gruta California, Região Fortica, 22.09.1997, P.S. Santos coll. Eleonora Trajano leg. (Museo de Zoologia, Sao Paulo).

**General distribution:** USA (California), Mexico (Cueva de los Sabinos, San Luis Potosi), El Salvador, Nicaragua, Panama, Cuba, Haiti, Bahamas, Bimini Is., St. Vincent Is., Trinidad Is., Venezuela (Caracas, Rancho Grande), Guyana, Colombia, Peru, Bolivia (Coroico, Chulumani, La Paz), Brazil, Paraguay.

**Remarks.** Genus *Pselliodes* involves two neotropical species: *P. guildingii* (Newport, 1845) and *P. chagualensis* Kraus, 1957. While the former is quite widespread in the entire Neotropics, reaching California on the north, the latter is only known from its type locality - Chagual, Rio Marañon in Peru. Six other members of *Pselliodes* have been reported from Africa, thus proving the Trans-Atlantic distribution of the family and the genus. However, at present the systematical position of the African congeners is insufficiently known and needs re-evaluation.

### Acknowledgements

I thank all collectors and especially Dr Petar Beron for allowing me to study their material. I am obliged to Dr Jean-Jacques Geoffroy for providing me with some of the Bücherl's and Silvestri's papers on Scutigermorpha.

### References

- HAASE E. 1887. Die Indisch-Australischen Myriapoden. I. Chilopoden. - Abh. Ber. Zool. Anthropol. Mus. Dresden, 5: 1-118.
- SILVESTRI F. 1935. Chilopoda. Wiss. Ergebn. Niederl. Exped. Karakorum, 1: 194-204.
- STOEV P. 2002. A Catalogue and Key to the centipedes (Chilopoda) of Bulgaria. Pensoft Publishers, Series Faunistica, 25, Sofia-Moscow, 104 p.
- WÜRMLI M. 1972. Chilopoda von Sumba und Flores. II. Geophilomorpha, Lithobiomorpha, Scutigermorpha. - Verhandl. Naturf. Ges. Basel, 82 (2): 205-214.
- WÜRMLI M. 1973a. Zur Systematik der Scutigeriden Europas und Kleinasiens (Chilopoda: Scutigermorpha). - Ann. Naturhist. Mus. Wien, 77: 399-408.
- WÜRMLI M. 1973b. Die Scutigermorpha (Chilopoda) von Costa Rica. Über *Dendrothereua arborum* Verhoeff, 1944. - Stud. Neotrop. fauna, 8 (1): 75-80.
- WÜRMLI M. 1974a. Systematic criteria in the Scutigermorpha. - In: Symposia zool. Soc. Lond. Academic Press, New York & London, 32: 89-98.
- WÜRMLI M. 1975a. Revision der Hundertfüßler-Gattung *Thereuonema* (Chilopoda: Scutigeridae). - Entomol. Germ., 2 (2): 189-196.
- WÜRMLI M. 1975b. Scutigermorpha von Madagaskar. Die Identität von *Lassophora madagascariensis* Verhoeff, 1905. - Boll. Soc. Ent. Ital., 107 (3-5): 70-74.
- WÜRMLI M. 1977. Zur Systematik der Gattung *Scutigera* (Chilopoda: Scutigeridae). - Abh. Verh. naturwiss. Ver. Hamburg, (NF), 20: 123-131.
- WÜRMLI M. 1978. Synopsis der neotropischen Psellioididae (Chilopoda: Scutigermorpha). - Studies neotrop. Fauna Environ. 13 (2): 135-142.
- WÜRMLI M. 1979. Taxonomic problems in the genus *Thereuopoda* (Chilopoda: Scutigermorpha: Scutigeridae): the Role of Postmaturational Moultings. - In: Camatini M. (Ed.). Myriapod biology. Academic Press, London, New York, etc., 39-48.
- WÜRMLI M., NEGREA S. 1977. Les Scutigermorphes de l'île de Cuba (Chilopoda: Scutigermorpha). - Fragmenta Faunistica, 23 (7): 75-81.

Received on 25.08.2002

Author's address:  
Pavel Stoev  
National Museum of Natural History  
Tsar Osvoboditel Blvd. 1  
1000 Sofia, Bulgaria  
E-mail: pavelsto@nettaxi.com

## **Скутигеруме (Chilopoda: Scutigermorpha) в колекцията на Националния природонаучен музей**

Павел СТОЕВ

(Резюме)

Съобщавам се седем вида скутигероморфни многоножки от колекцията на Националния природонаучен музей в София. Материалите са събрани предимно от г-р Петър Берон в Албания, Афганистан, Боливия, Виетнам, Гърция, Индонезия, Китай, Куба, Непал, Пакистан, Румъния, Тайланд и Турция. Два екземпляра от *Pselliodes guildingii* (Newport), уловени в пещери в Бразилия, принадлежат на Музея в Сао Пауло. Освен многото хорологични данни, два вида - *Thereuonema syriaca* Verhoeff и *Thereuopoda longicornis* (Fabricius), са нови, съответно за фауната на Пакистан и Непал.